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The Laboratory School of the Indiana State Teachers College Elementary Grades

Introduction

This is the second of a series of five issues of *The Teachers College Journal* to be devoted to the Laboratory School of Indiana State Teachers College. The first issue was given over to a statement of the philosophy of the school and to a description of the physical plant and its environment. It is the purpose of this issue to describe the program of the elementary division at its present stage of development.

The laboratory school is now in its fourth year of existence. In order to understand the program, certain facts should be noted. The school borders the business district of the city. The home conditions vary greatly, ranging from the highest priced apartments in the city to houses which are most inadequate. Approximately eighteen per cent of the mothers work outside the home. It becomes apparent that under these conditions the school must assume more than the usual responsibility for social development. These conditions, together with the fact that the school must serve as the educational laboratory

of the college, are basic to the development of the program.

It was in the light of this dual problem that a committee was appointed to formulate a philosophy for the school. Obviously space does not permit the restatement of the philosophy. Since it is still basic to the program, a brief resume by one of the members of the committee which worked out the original statement is given herewith.

WHAT WE BELIEVE

The laboratory school of the Indiana State Teachers College is an integral part of the college and as such is a state institution. The school receives its pupil body for the most part from the section of the city of Terre Haute which immediately surrounds its buildings and comprises a city school district.

The school conceives its purpose to be of service to: (1) the children who attend it; (2) their parents and others in the community; (3) the college students who use the school as a laboratory; (4) those from other sections of the state who visit it;

and (5) those from the nation at large who may be interested in its work with any of these factors.

The school feels that the children are the media through which principles at work in this immediate environment are transferred to the local community, and the college students are the media through which those same principles are taken into the larger community, the state.

As its basic philosophy, the school accepts the idea that life is exceedingly good when fully lived. An individual lives completely, though, only so far as he becomes progressively and to the highest degree possible an integrated personality that contributes to society the best of which he is capable. At the same time that he is giving his best, he receives satisfaction from the social whole of which he is an integral part.

Out of the school's philosophy of life grows its philosophy of education which states that formerly education was thought of as a preparation for life. This preparation took place within the four walls of an institution—public or private—designated as the school. Today education and life are synonymous. That is, education is life, or growth, beginning with birth, ending only at death. Life does not exist wholly within the school; therefore, it becomes the duty of the school, which has been established by society as an agency of perpetuation and improvement, to seek to develop within each individual attitudes, abilities, and understandings that are necessary for satisfaction in personal life and constructive participation in social life.

From the school's philosophy of education grow its principles which are: (1) Education is an experiencing which means growth and change in the physical, mental, emotional, and social phases. (2) Physical and social environment condition and affect growth and behavior. (3) As experiences and environments change, habits and behavior patterns already established may no longer fit the situation and it is necessary then that intelligence play its part. (4) The teacher guides and helps by allowing sufficient freedom with desirable life ex-

periences to challenge and develop to the highest degree possible the capabilities of the individual and of the group. By close observance of the principles given, the school hopes that its service to the pupil body, to the community, to the college and its students, and to the larger community may be an inspiration for both individual and group development and thus fulfill its function as a laboratory school.¹

The practical application of this philosophy involves (1) a program of interpretation as a means of developing community understanding, (2) provision for experimentation to further educational knowledge, (3) provision for developing in the pupils certain essential habits, attitudes, and appreciations as follows:

1. Development and practice of good health habits
2. Development of reasonable competence in the tools of learning
3. Development of essential habits and attitudes of study
4. Development of a basic background for social studies through provision for firsthand and vicarious experiences
5. Appreciation of the possibilities in this environment
6. Practice in critical thinking
7. Development of ability to make necessary social adjustments through practice in meeting social problems
8. Development of habits and attitudes of appreciations
9. Development of reasonable skill in working out constructive enterprises
10. Opportunity for creative expression

Space does not permit a description of all the special features of the program. For example, the program for developing health, art, music, and recreational skills will be included in one of the forthcoming issues of the *Journal*. However, evidence of the functioning of these departments will be found in almost every section.

¹"The Laboratory School of the Indiana State Teachers College," *Teachers College Journal*, Vol. IX, No. 2 (November, 1937), pp. 19-21.

Developing School and Community Relations

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The interpretation program which is being developed in the laboratory school is based on the premise that mutual understanding and co-operation between school and community are essential to the progress of the school. The staff is endeavoring, therefore, to develop a program adapted to the needs of its particular community. Among the methods which have been tried out in the three years the school has existed, certain ones have been more productive than others. Examples are cited to illustrate those which are proving effective in the development of the program.

[BULLETINS.—Timely bulletins sent from the principal's office to the parents in the district have proved to be one of the best means of maintaining close contacts between the school and the home. They are used for various purposes; sometimes they invite parents to participate in school activities or to attend school programs or parties; at other times they inform them regarding change in school policies; again their purpose may be to make meaningful certain educational movements. Teachers, too, use bulletins as a means of promoting understanding. An attempt is made to make each bulletin clear, concise, and friendly.]

[COMMUNITY IMPROVEMENT.—One responsibility of the school is to join with other agencies in bringing about desirable improvements in the community. Since certain home conditions in the laboratory school district could be improved, an effort is made to sensitize both children and adults to the possibilities of the environment in which they find themselves. To this end the science teacher has attempted to interest children at all levels in the growing of plants, bulbs, and shrubs and has endeavored to develop an appreciation of the part they play in beautifying the surroundings of their community.]

The following interesting experiment is now in progress. When a child shows unusual interest in the growth and care of plants and expresses a desire to beautify his home surroundings, the science teacher visits his home with a camera and secures a picture before any attempt at beautification has been made. After suggesting possibilities and planning carefully with the child and other interested members of the family, she returns later for a second picture. Both pictures are then placed on display in the laboratory school. While of necessity the number of homes visited is comparatively few, this plan will serve as an inspiration to others and should prove an effective means of securing desirable community improvements.

[KINDERGARTEN MOTHERS' STUDY GROUP.—There must be close home-school relationships if integrated personalities are to be developed. Schools are realizing this more and more and as a result are providing many situations whereby both the home and the school are given the opportunity to share in children's development.

As a means to this end the Kindergarten Mothers' Study Group, under the direction of the kindergarten teacher, is functioning in the laboratory school. This group, in monthly meetings, uses as its guide the "Study Course on the Pre-School Child" provided by the *Parents' Magazine*. A mother who is particularly interested in the subject suggested for study reviews the article for the month. She then leads the group in an informal discussion. All mothers are encouraged to share experiences, to present questions, and to discuss problems pertinent to the group.]

PARENTS' ART GROUP.—When children interested in making toys for an art shop began inquiring, "May I put the doll that Mother made in our art shop?" "May I bring the airplane my Father made?"

"May I put my Father's wood-carving with ours?" a corner designated as "Mothers' and Fathers' Corner" appeared in the art shop. After many interesting contributions had been made, a mother expressed the desire to share in the art experiences which her child was enjoying and which she never had experienced. This mother's request gave a cue for organizing a group of parents who will meet in the children's classroom with the art teacher as adviser.

By making accessible attractive, stimulating materials, by eliminating any causes for self-consciousness, by helping these parents with a minimum of direct teaching to experience art for themselves, it is hoped that there will develop not only a better appreciation of children's creative effort but an attitude of understanding and whole-hearted co-operation toward the school.

CONFERENCES.—One of the highest ranking media for educational interpretation and for co-operative effort is the conference. Conferences in which the parent and the teacher discuss frankly the individual needs and problems of the child tend to develop and maintain mutual understanding and sympathy on the part of both the home and the school.

Groups of parents are frequently invited to the laboratory school for conferences. The development of a new practice within a school system is often facilitated by a preliminary discussion of the plan with a small group of interested parents, thus helping each member of the group to feel his responsibility for interpreting the plan to the community.)

LIBRARY SERVICE.—Parents are encouraged to use the facilities of the laboratory school library. The librarian has prepared and sent into each home a suggested list of readings for parents and a list of books

recommended for children at different levels.

Through open house and conferences the librarian helps to acquaint the parents with library facilities and to make the school library really function in the community.

Many other efforts at interpretation and community co-operation form a part of the laboratory school program. However, too much emphasis must not be given what the school does for the home and community. Recognition must also be made of what the home and other social agencies do for the school.

PARENTS' CONTRIBUTIONS.—The contributions of the parents and friends are too numerous to list in detail. Briefly, they have given or loaned interesting, usable materials and equipment to the school; they have sent valuable information with children; they have come into the classroom to give travel talks and to relate interesting experiences; they have helped arrange for excursions; they have furnished transportation for trips; and they have cared for plants and schoolroom pets during the vacation periods.

COMMUNITY CONTRIBUTIONS.—Stores, factories, mills, and public buildings have opened their doors to groups of laboratory school children who were interested in becoming acquainted with the resources of the community. They have made possible many experiences and have supplied much valuable information which has helped children interpret and appreciate the services rendered by many community agencies. In addition, they have been most generous with materials for exhibits and for use in other classroom activities.

The laboratory school believes that if it continues to give the community an understanding of the school through participation, progress will be made toward the development of stimulating friendly relationships.

Developing Attitudes and Habits in the Kindergarten

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Through cheerful environment and carefully planned activities the kindergarten of the laboratory school endeavors to provide a situation in which the pupils may develop wholesome physical, mental, and social attitudes and habits.

From the standpoint of physical development provision is made for well-rounded growth. The room lends itself well to the development of the physical well-being of the children. It is spacious and airy. There is an alcove for toys and a cheerful fireplace. Toilet and lavatory facilities are available in an adjoining room. There are opportunities for many big muscle activities such as skipping, walking the balance beam, climbing and hanging on the swinging bar, riding tricycles, and throwing balls. Energy is conserved through the daily milk lunch, and habits of relaxation are established through the daily rest period.

The curriculum for this group is planned in the light of the purposes previously stated. The major centers of interest are home life, seasonal science interests, and attention to special days, with some explorations into the community. The activities are designed to widen the experiences of the children and to develop desirable habits and skills. They include conversation periods in which individuals learn to share their experiences with others. Often these periods are given over to developing plans. This is especially true when a playhouse, a garden, or some other activity is in progress. Constructive activities offer opportunity for developing such manipulative skills as using scissors, painting, pasting, hammering, and block building. Many of these same skills are used in the opportunities provided for creative expression. In addition to the manipulative skills which are developed through constructive activities, there are opportunities for establishing good work habits. Some of the

most important of these habits are planning before attacking a job, attending to the problem at hand, working pleasantly with others, sharing materials, completing one's work satisfactorily, and putting materials back in place.

It becomes apparent that there is ample opportunity for social and emotional development in the program. It is recognized that many children have their first experience in being one of a group when they enter kindergarten. Thus, much thought is given to helping each child learn to enjoy the social responsibilities of contributing, sharing, taking turns, and caring for property. The free play period is of particular advantage in practicing these habits, for while the choice of toys and materials seems unlimited to the onlooker, certain ones are more popular than others. Situations often occur in which the children discover the value of social behavior patterns and learn to accept them happily.

This fall the need of establishing habits of thoughtfulness for others led to the selection of a Christmas toy unit. It grew out of a conversation concerning what the children could do to bring happiness to others at Christmas. The need of toys at the Day Nursery, which is located within the school district, was brought to their attention. Several of the children who had formerly attended the Day Nursery contrasted the play equipment of the nursery with that of the kindergarten. They decided to build toys and began immediately to make plans. The list of toys they wished to make was a long one. It included tables, chairs, beds, cradles, cupboards, settees, wagons, airplanes, sleds, and dolls.

Since there was no money available, the first problem was to secure materials. The children brought from home and community



PLANNING THE RECORD

wooden boxes, orange crates, and usable scraps of lumber.

Certain toys were made by individuals. Others were made by two or three working together. From the standpoint of the development of desirable skills, habits, and attitudes, the construction of toys for this particular purpose was most satisfactory.

Throughout this project the manipulative skills of handling hammers, nails, saws, pliers, sand paper, measuring sticks, paints, and paint brushes were developed. Desirable social habits and attitudes were established through group discussion and planning of work, apportioning materials and supplies, taking turns in the use of the tools, being careful and economical with the equipment, returning of all supplies to their proper places, and cleaning up the room at the conclusion of a day's work.

Finally a committee of the kindergarten children was selected by the entire group to deliver the toys to the Day Nursery. Who could blame any child who hesitatingly and sometimes reluctantly parted with a toy which he had created and which through the days had come to have value for him! Still, they gave joyously.

This project, of course, is only one of many undertaken during kindergarten days. In other seasons, there are circuses to be made, flowers to be planted and studied, fairs to be held, rooms to be planned and furnished, pictures to be designed, and a multitude of related activities. From all these experiences it is hoped will come a child, healthy in body, happy at heart, mindful of his relationship, and at peace with the world.

Developing the Expression Area of the Reading Readiness Program

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Providing a reading readiness program for pupils entering the first grade in the laboratory school assumes a place of major importance as it does in all good schools. The goals of this program have come to be quite definitely defined. They include, according to Harrison:²

"breadth of meaningful concepts
breadth of spoken vocabulary
accurate enunciation and pronunciation
a desire to read
correct use of simple English sentences
ability to do problematic thinking
ability to keep a series of events in mind."

Experimenting with this program has led us to feel that with us the development of the expression area is of first importance. Developing this area has involved provision for a variety of experiences in order that meanings basic to expression may be accumulated. In addition, it has necessitated planning ways and means of stimulating expression and of building desirable speech patterns.

The program as it has developed is based on the understanding that the teacher believes it her responsibility to provide:

1. A learning situation in which the child might develop confidence
2. Experiences from which he would build a fund of meanings
3. Experiences which would stimulate expression
4. Opportunities for developing good speech habits

The first step in the program is the recognition of the fact that when the child enters school he has many adjustments to make. He comes from his home and family to the school and strangers. Compared with his usually small home, he finds a building with many halls, doors, and stairways, and he becomes confused when trying to find

his way about. He loses his sense of security

To meet this need a series of exploratory trips is taken. The first excursion leads to all parts of the building—namely, the auditorium, the play room, the library, the office, and the toilet rooms. Next, the children are introduced to the personnel of the building—the principal, his secretary, the doctor, the nurse, and the janitors. Other trips are taken to places in the neighborhood to enjoy the weather, the trees, the flowers, and the birds. These trips give common experiences with opportunity for building the vocabulary that is needed for living together. In addition, they bring about a return of the feeling of security.

One of the best means of developing a need for problematic thinking which insures a desire for expression has come through the use of toys and games. Those which involve planning or which stimulate discussion are of most value. They divide themselves into two groups: those that lend themselves best to individual use and those that are valuable for group play. Individuals play with large wooden beads, small wooden trains, building blocks, large cardboard and wooden puzzles, a stove, and dishes. The groups use blocks, dolls, and the following games: Animal Lotto, Bird Lotto, Mosaics in Marbles, Word Pictures, Building Fun, Tinker Toys, Dominoes, Magnets, Magic Dots for Little Tots, Stak, Hickety Pickety, Trikki Stiks Sr., and Pick Up Sticks.

The daily schedule provides for a half hour of free play. At that time the child goes to the toy and game shelf and chooses what he likes. The period is one of the happiest during the day. The shy, timid child and the aggressive child each forgets himself as he becomes interested in his toy or game. The children soon learn to play in groups. They plan and discuss what they need to do as they play and work to-

²M. Lucile Harrison, *Reading Readiness*, (Houghton Mifflin, 1936), Fig. 1, pp. 6-7.

gether. The teacher goes from one child to another and from group to group. This makes for a more sympathetic understanding between child and teacher and helps each child to feel that he belongs to the group.

In solving the problems involved in playing together, it must be recognized that many of the children have had little experience in playing in groups and in sharing toys and games. Standards for getting along together are discussed as the need arises. After several days of play followed by discussion, the following standards have been formed:

1. Watch voices
2. Stay with toy or game chosen
3. Have something to show the group
4. Take care of toys and games
5. Share toys and games
6. See that toy and game shelf is in order

Discussion follows the free play period in order that the children may evaluate their accomplishments. They make a check of group observance of their standards and attention is called to those which need special consideration at the next play period.

The poetry period yields rich returns in terms of the pupils' enjoyment and in cultivating desirable speech patterns. We feel with Eloise Ramsey that, "Children who are fortunate enough to have wise literary guidance grow naturally and happily into possession of their poetic heritage."¹

The procedure which has evolved from the experimentation carried out several years ago in the laboratory school is about as follows:²

1. The name of the poem and the author is given and the book from which the poem is to be read is shown to the children.
2. Very little discussion precedes the reading. Nothing is done that could influence a child's reactions to the poem except as he interprets for himself the reader's presentation.

3. After the reading of the poem, the teacher waits for spontaneous expressions and questions. If the children do not respond, another poem is read. If the children ask for the poem to be re-read, the teacher does this immediately.

4. Each day one or two new poems are read and the children are given an opportunity to choose for re-reading poems that they have enjoyed at an earlier date.

Poems which the children have enjoyed include the *Mother Goose* rhymes, "Little Turtle" by Vachel Lindsay, "The Goldfish" by Dorothy Aldis, others found in *Silver Pennies* edited by Blanche Jennings Thompson, "When We Were Very Young" and "Now We Are Six" by A. A. Milne, "Peacock Pie" and "Songs of Childhood" by Walter De LaMare, "Fairies and Chimneys" by Rose Fyleman, "Under the Tree" by Elizabeth Maddox Roberts, and "Sing Song" by Christina Rossetti.

Children need the poetry hour as a daily experience so that a lasting love of poetry is established and the teacher tries to remember that the enjoyment of poetry is an end in itself.

A fourth medium is stories. Many teachers use the home unit as a background for the work in the first grade. This year the teachers are giving more time to developing freedom of expression through stories and original dramatizations. The stories enjoyed by the children include folk tales as well as modern tales. Some of the best loved are "Three Bears," *Little Black Sambo*, the *Angus Stories* by Marjory Flack, *Snipp, Snapp and Snurr Stories* by Maj Jan Lindman, and *Mr. Bradley's Car* by Caroline Leach.

The story period has stimulated the children to plan and to build a stage on which to give their productions. They have had conferences with the art, music, and physical education teachers. Much planning has been involved in building the stage and each dramatization has led to further planning. As a result, the children have built a stage large enough for them to use. It is made of large mattress boxes. Colorful designs have been painted on the

¹Eloise Ramsey, "The Poetry Hour," *Childhood Education*, (November, 1931), pp. 115-119.

²Frances R. Dearborn, "Poetry for the First Three Grades," *Elementary English Review*, (March, 1930), pp. 67-69.

side fronts and on the curtains. Properties have been made as the work progresses.

All this means that the children have had to think through situations and have had to discuss their problems; from their need they have learned to express themselves more effectively. Through the various experiences—the exploratory trips, the

play with games and toys, listening to poetry and stories—it is hoped that the children may learn to express themselves freely and effectively in any situation. Experimentation to discover other experiences that are rich in stimulating expression will be continued.

Providing First Grade Science Experiences from Community Resources

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The problem of providing rich science experiences for pupils in city schools is conceded to be a difficult one. Surprisingly enough, the home and community resources of the laboratory school district have provided amply for the science experiences of the first grade group. In addition, the children have acquired at an early age certain basic understandings and appreciations of their own environment as a result of their use of local materials.

The following record of science experiences will show the diversity of the materials and of their possibilities.

THE ROCK GARDEN.—Early in the fall the children began to bring to school unusual and interesting rocks. These were classified according to color, hardness, smoothness, flatness, and roughness. The interest in collecting and classifying led to a discussion of the uses of rocks and resulted in a proposal to build a rock garden and an aquarium in the school room.

The teacher located a cast off zinc-lined table in which to build the garden and furnished a galvanized pan for the aquarium. Learning how to build the rock garden stimulated trips to observe those in the neighborhood. It led also to exploring for the necessary supplies. From home and friends the children collected the necessary tools and materials—soil, plants, more rocks, tadpoles, and fish food.

Stocking and balancing the aquarium necessitated a trip to a nearby greenhouse.

Aquatic plants and snails were purchased.

Building and maintaining the rock garden and the aquarium have provided rich learning situations for the children. For example, when the water in the aquarium began to get low, it became apparent that the children had no knowledge of the process of evaporation. They thought that when the water disappeared the fish drank it, or that it leaked out of the pool. This situation was cleared up by performing experiments to show the presence of water in air and the way in which evaporation takes place.

A second observation of interest to the children was the way in which the plants in the rock garden turned toward the light.

The responsibility of caring for the garden and the aquarium have been deeply satisfying to the children. Evidence of this fact has come from their frank interest in the changes and from the comments of their parents and friends who came to visit and to note developments in the garden.

PETS.—The first pet to be brought to the room was a baby chipmunk loaned by the science department of the college. Observation and discussion of the habits of the chipmunk led to discussion of the adjustments and adaptations made by other animals.

The large cage which is part of the room equipment encourages the bringing of pets to school. Through the year guinea pigs,

rabbits, chicks, a baby duck, a kitten, and turtles have been observed, cared for, and enjoyed.

TREES.—The trees in the neighborhood have provided opportunity for study. During the fall the children learn to notice the general shape of a tree, the leaves, the bark, and the seeds or fruit. They collect leaves and seeds for booklets and leaf prints and learn to identify several of the common deciduous trees and leaves.

WEATHER.—Winter brings a spontaneous interest in weather. One day when a child remarked that it was much colder outside than it had been the day before, several disagreed. So a thermometer was introduced. After the children had learned to read the temperature, the thermometer was placed outside the window. They read it daily and in a short time became quite accurate. A weather chart serves to maintain interest in weather conditions. The children record daily the following conditions: snow, rain, sun, clouds, wind, and temperature.

BIRDS.—The return of the birds in the spring furnishes another science interest.

The characteristics of several of the common ones are studied. The characteristics of greatest interest to the pupils include appearance, food, nest, eggs, and value to man. In connection with their study of birds, the children build bird houses and feeding stations which they are allowed to place in their own yards.

GARDENS.—When the children begin reporting that their parents are gardening, they are encouraged to make flower and vegetable gardens also. In order that they may understand the way in which plants grow and develop, germinators have been made by placing kernels of corn or beans in wet cotton between two layers of glass. Through the glass it is possible to watch the development of the root, the stem, and the leaf. Seeds are also planted in soil in order that the more normal development can be observed.

These science experiences are indicative of the possibilities of a city environment for instruction and pleasure at school and for worth-while activities at home.



"HOW DOTHT THE BUSY LITTLE BEE"

Developing Reading Interests and Skills

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Books play an important part in the life of the laboratory school. They are an active agency in interpreting and in enriching the local as well as the larger community to the school.

In order that the children may enjoy books and use them wisely, they are guided in building up and refining reading interests while they are also mastering the mechanics of the reading process.

The school, the classroom, and the library provide an environment that helps children to do these things. Everywhere there are books whose color, pictures, and type invite boys and girls to enjoy them. Teachers supplement this invitation by calling attention to the attractive features of books or by reading aloud parts of the stories. They also create a desire to read by referring to books which have been enjoyed by previous groups. For instance, one teacher caused a near stampede for the library when she asked during the morning conversation, "Do you remember the story of Ferdinand?" After the pupils had enthusiastically recalled their favorite parts of the story and had told about some figures of Ferdinand which they had seen in a ten-cent store, the teacher remarked, "Last night I saw a copy of a new book by Munro Leaf, the author of Ferdinand." The remarks—"What is its name?" "Is it funny?" "Are there pictures?" "May I go to the library for it?" "No, let me!"—that immediately arose showed clearly that there was no need for further introduction of *Wee Gillis*.

The teachers stimulate interest in poetry by their natural, informal presentation of many poems in connection with everyday experiences and units of work. A child in the fourth grade told one morning about

watching his cat at play. The teacher read "The Jolly Little Cat" by Mary B. Bartlett and "The Mysterious Cat" by Vachel Lindsay. The result was that before they finished the pupils looked up and brought into the classroom nearly one hundred poems and stories about cats. They copied poems and wrote original rhymes. They found pictures and made *A Book about Cats*. Enjoyment of some of the poems and stories was heightened by dramatization. Before the children's interest waned, the teacher read aloud "The Cat that Walked by Himself." Because the pupils showed great pleasure in the selection, she told them the story of Kipling's life. This story was their introduction to biography. Afterwards when they heard of a new author they asked, "Where did he live? What did he do? Did he travel?" How delighted those children were to learn that there is a type of reading material which would answer their own questions about people!

At another time this teacher introduced biography when the pupils were studying the New England States. She rewrote in simple language stories which she entitled *Famous People of the New England States*. The children began searching for themselves biographies of natives of that section and books by Alcott, Longfellow, Holmes, and others. *Little Women*, *Little Men*, *Eight Cousins*, "The Children's Hour," "Concord Hymn," and "The Height of the Ridiculous" were very popular.

Once children read biography they are launched on a type of reading that carries them into the fields of the sciences and social studies, into stories of travel and exploration. Homeroom teachers and teachers of music, art, physical education, and sci-

ence aid in developing interest and understanding in these types of reading by preparing and by helping children work out bibliographies, posters, exhibits, and displays of many kinds. For example, a unit, *Peoples of Different Countries*, culminated in an auditorium program in which all these reading interests were evident.

Teachers of the laboratory school allow time for free reading. During these hours the children pursue their own recreatory reading interests, show their books to others, talk about them, read aloud parts, point out illustrations, and organize their own companies for dramatization. These periods are helpful and inspiring.

In addition to stimulating wide and effective reading, teachers plan specifically for developing the reading skills essential in the content subjects since much of the instruction, especially in the upper elementary grades, is based upon information gained from books. Because social studies, as is stated elsewhere, is the core subject in the curriculum, it provides a great part of the reading experiences of the child and offers a satisfactory illustration of the way in which reading skills are built up. Obviously the more diverse the activities, the greater is the need to read all types of material and to read for all types of purposes. Many projects require such study skills as the location of materials, intensive reading for information, skimming, taking notes, and outlining. Teachers give definite training in all these skills. Since the fundamental skill is that of understanding what is read, only those skills directly related to comprehension will be described here.

To improve comprehension the teacher examines the reading ability of the pupils through the use of standardized and informal reading tests. Next she studies the grade level of the material to be used and gives to each that which is adapted to his ability.

Recognizing that the superiority of some readers is due largely to the number and quality of the concepts that have been formed, attention is given to developing those understandings which are basic to the social sciences. Examples of such major concepts are: climatic conditions, sur-

face features, occupations of man, and simple governmental functions.

The usual approach to social studies is through problem solving. The teacher uses a conversational approach to develop a favorable mindset toward the problem. Then she makes a survey of the pupils' knowledge in order to know which concepts need to be fully developed and those which need to be clarified. The teacher enriches the conceptual background of the pupils by providing well selected activities such as taking excursions, listening to talks, collecting materials, doing sensible construction work, and studying maps, charts, and pictures. The teacher places persistent emphasis upon accuracy of ideas.

In addition to understanding concepts, the child must be able to recognize the terminology in his text. For this reason the teacher usually works with the children as they begin to read text and reference material in order to assist when difficulties arise. Later definite assignments are made. The superior readers study quite independently, but careful guidance is given to those who need it. Provision is made for some type of comprehension check. The best test of comprehension is the child's ability to evaluate and to organize what he has read in terms of the problem to be solved. Opportunities are utilized to develop skill in organization beginning with the simple classifications of ideas in the lower grades and continuing to the more complex skills of summarizing and outlining in the upper grades. Provision is made for capitalizing on situations in which there is a need for formulating topic headings and for selecting and arranging essential details. As the need for better control over these skills becomes apparent to the pupils, those skills which need strengthening are isolated and appropriate drill is provided in the reading or in the English period. As children become skillful in acquiring information from reference material they make increasing use of library facilities.

As a means of developing good library habits each room has one period a week with the librarian in the library in addition to the usual services of a library. For all groups activities are planned which lend themselves to developing an appreciation



CHARGING BOOKS AT THE LIBRARIAN'S DESK

of books. For example, when beautiful new books are shown the need for care is discussed. Attention is called to the need of personal cleanliness in handling books. Demonstrations are given as to the correct method of opening and turning pages.

The pupils have library privileges and grow, with practice, in their ability to use library methods and tools. Beginning with the sixth grade the librarian gives intensive training in the use of library skills.

The pupils are given practice in: the rapid use of the alphabet when returning books to their proper places; finding quickly by classification books in such fields as fiction and mythology; the use of the card catalog; the use of the encyclopedia; and a knowledge of the Dewey Decimal System.

The school hopes that through these various experiences with books the pupils will build up interests which will make life richer, happier, and more meaningful.

Developing Skills and Appreciations in Arithmetic

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In formulating the policies for the teaching of arithmetic in the laboratory school the staff recognizes fully the value of school and community activities in stimulating a need for quantitative thinking and for computational skills. It is committed to the fact, however, that a carefully planned instructional program is essential in order to develop the mathematical knowledge and skills needed by the average person.

In the activity program as carried on in the laboratory school it has been the policy to take careful cognizance of the two-part nature and function of arithmetic instruction, namely, the computational phase and the social phase. The teachers recognize that these two phases are closely related and are interdependent. The teachers realize also that any well-planned activity cuts across the boundaries of all subject matter areas. They know that some activities are rich in number experiences and furnish excellent motivation for practice periods necessary for the mastery of arithmetical processes already somewhat familiar to the children. On the other hand, an activity often opens the way for the presentation of entirely new subject matter. Again, other activities aid in the development of ability in quantitative thinking so necessary in the intelligent understanding of current happenings. The greatest value of the number situations arising in any activity is the building up of a rich background of mathematical concepts which the teacher, through careful planning, so organizes as to provide for gradual and orderly growth in the social order in which we live.

Space will not allow for the survey of the number situations arising in the many activities carried on in the laboratory school. An examination of a few that have been of particular interest with a group of sixth grade children will serve to illustrate some of the values already pointed out.

A unit on the study of Mexico, while pri-

marily social studies in content provided an excellent opportunity for the study of the metric system. A guest speaker was invited to tell of her recent trip to Mexico. The interest in all that she said was keen. Many of the things mentioned the children had heard or read something about, but when the speaker remarked that the speedometers on Mexican automobiles register kilometers instead of miles a new interest was aroused. Many questions came forth spontaneously: What is a kilometer? How long is a kilometer? What do the Mexicans call a yard, a foot, and an inch? How many kilometers are they allowed to drive per hour? Does any other country measure distances in this way?

All of these questions were discussed in the activity hour. Later, in the period set aside for arithmetic, the children used their new interest in practice work which at that time chanced to be in common fractions. They learned that a kilometer is about five-eighths of a mile, and they had great fun changing Mexican speedometer readings to miles to see what records would be within the speed limits.

A child who followed world sports rather closely brought out the fact that the meter is used in the Olympic games in measuring distances, but he added, "I never knew just what a hundred-meter race meant. I always thought it must be the same as our hundred-yard race." The class soon found that the distance covered in the hundred-meter race is greater than in the hundred-yard. While the work with the metric system is usually allocated to the eighth grade, these sixth grade children had a clearer concept and better understanding of the metric system in the measure of distance than is usual in eighth grade groups.

An activity which developed with Fire Prevention Week brought out many more number situations than the teacher had anticipated. The class became especially in-



A HEATED DISCUSSION OF MEXICAN CUSTOMS

terested in the cost of maintaining a first class fire department. In a visit to the Central Fire Station they gathered many statistics all of which were used in practical problems. The reading of statistics given out by fire insurance companies concerning losses by fire gave excellent practice in reading large numbers. The study of graphs showing losses in different years proved valuable and interesting and led to the making of simple graphs using facts learned at the local fire department.

The unit of work on the coal industry, through the many uses for numbers that arose, evolved from a so-called social studies activity to an arithmetic activity. Each day's reading furnished statistical data that gave rise to new problems. Some of these involved the reading of large numbers, com-

puting the cost of heating our homes, the value of coal mined, miners' wages, making graphs, scale drawing, finding fractional parts of numbers, and many problems requiring a knowledge of per cent. As the work in per cent was new, the teacher found it necessary to exercise great care in the organization of the material so that the pupils' work with the new subject matter was logical and orderly.

These examples show that many activities are rich in arithmetic situations which are both social and computational. There is a place for these in the activity period, but there is also need for a definite time to be set aside for the orderly development of new subject matter, for the application of new principles, and for the mastery and maintenance of skills.

Developing Skills in Spelling and Writing

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Respect for the intelligence of childhood and youth requires the assumption, and the realization of that assumption, that children who spend twelve years of their lives in the public schools have an interest in attaining an educated status during these years.

The chief purposes of the teaching of spelling in the elementary school are to teach children the spelling of words most frequently used in writing and to teach them good study technique. The purpose of instruction in handwriting is to enable children to write legibly in an increasing degree at an increasing speed to acceptable standards.

The materials of instruction used in the laboratory school are those adopted and used throughout the state. The spelling texts are: *My Word Book*,⁵ Grades 2, 3, 4; *Progress in Spelling*,⁶ Grades 5, 6. In spelling, the prescribed lists of words are supplemented by individual lists of words needed in written work. The *Write Well Writing Series*⁷ is basic to writing instruction in all grades of the elementary school. Classroom notices and labels, stories and poems, diaries, summaries, and letters of many types—to schoolmates, for materials, to relatives and friends—provide use for application and practice. Manuscript writing is taught in the first two grades.

Method in spelling is based upon an appreciation that the desire for social approval is innate and that the desire to do well is a worth-while motivating force.

Approximately seventy-five minutes each

week are devoted to direct instructional procedures. This is the usual proportion in relation to the social value of these subjects and is in line with current use.

The procedures followed in the teaching of spelling and handwriting are both direct and indirect, formal and informal.

A pre-test of fifty words selected at random from the words to be studied is given at the beginning of each semester with another test equal in length and difficulty given at the end of the semester. Except for certain survey purposes these tests picture accomplishment better than standardized tests of words not having been studied and of words low in frequency of use.

Teaching these subjects is individualized on the basis of weekly pre-tests. These indicate the work to be done by children in need of instruction. In addition, they make it possible to exempt from practice children who are able to spell correctly the words of the lists and who have reached certain handwriting standards. These children are allowed to engage in other worth-while activities. For example, they may co-operate in helping others to reach their goal. Words repeatedly missed by a child are kept in his spelling notebook for frequent study. Exercise cards in handwriting are available for further practice in the specific needs of an individual child. In addition, the individual differences are provided for through the remedial programs of the school and classrooms. While in general the program outlined by the text is carried out, special attention is directed to the development of effective methods of study.

In handwriting instruction, legibility is given the most consideration; good form and neatness are stressed for their contributions to legibility and appearance. Since handwriting should be free and rhythmic to be done with ease, good writing position is encouraged.

⁵E. C. Seale and F. S. Breed, *My Word Book*, (Chicago: Lyons and Carnahan, 1934).

⁶Ernest Horn and E. J. Ashbaugh, *Progress in Spelling*, (Philadelphia: Lippincott, 1935).

⁷Emma G. Peed, *Write Well Writing Series*, (Bloomington, Indiana: Columbia Press, 1934).

When the transition is made to cursive writing, some attention is given to keeping up skill in manuscript for lettering labels, art work, and the like.

It has been found advantageous to divide the direct instruction in handwriting on a weekly basis as follows: three days cursive, one day manuscript, and one day application of handwriting to other lessons. During the applied writing period a composition, spelling lesson, written arithmetic exercise, or page for a book of poems is used as the writing lesson. Included in the writing program are arrangement of papers, use of margins and paragraph indentions, letter writing forms, and numerals.

Objective evidence of progress is a significant part of the spelling and writing pro-

gram since experimentation has shown the advantage of graphic representation in promoting further growth. Each child keeps a line graph of his progress in spelling from week to week, and a similar one is kept for the class average. Bar graphs showing progress from Monday to Friday of a given week are kept when deemed advisable.

In handwriting the children learn self-evaluation of their own progress by comparing samples of handwriting with other pieces of former work and by frequent comparison of their work with the Ayres scale. The Ayres scale is selected because of its simplicity of use by both pupils and inexperienced student teachers. Handwriting samples of each child are scored by the teachers every few weeks and the progress is recorded graphically.

Developing Language Abilities

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Few children of elementary school age have any conception of the importance of effective English. No doubt this accounts for their slow progress in developing good habits of expression.

The desire to remedy this situation led to a reconsideration of the assumptions on which to base procedures. For convenience the essential abilities to be developed are outlined briefly as follows:

1. The ability to carry on a conversation or discussion in a friendly, interesting manner
2. The ability to make announcements and reports
3. The ability to write social notes and business letters
4. The habit of writing for pleasure

The basic assumptions are:

1. Growth comes from actual experience in expressing one's ideas.
2. There are natural situations which may be utilized to advantage in developing certain habits.
3. Opportunities should be provided for

spontaneous exchange of ideas.

4. No child should be expected to talk or to write unless he has something to say.
5. The timid child should be encouraged to express himself.

The problem then became: Are there a sufficient number of situations in which to develop these abilities without resorting to artificiality? Illustrations are cited briefly from situations which provided for effective practice.

The first of these was the general management of the affairs of the room. The management of the room offered many opportunities for discussion because the pupils shared in the responsibilities. This situation gave point to discussion because decisions were involved. Such problems as Shall we have a Hallowe'en party? Shall we build a log cabin large enough to use? Shall we help to fill a box for Junior Red Cross? were talked over thoughtfully because of the responsibilities entailed. In each case, the decision was in the affirma-



COLONIAL EXPERIENCES

tive; thus there was opportunity for planning, which was one of the most productive types of discussion. With experience, the children learned the technique of discussion. They checked the child who talked but said little. They encouraged the child who had good ideas but was shy about expressing them. They learned to stick to the point.

The unit on pioneer life also provided opportunity to develop and to practice several language abilities. The decision to build an authentic log cabin large enough to play in was arrived at after vigorous, pointed discussion. The problem of where to get the logs was real and though many suggestions were offered, it was not solved until one of the girls announced that logs might be procured from her father's farm. Making arrangements for getting the logs involved carrying messages from school to home in order to prevent mistakes. Riding back and forth to the farm provided opportunities for friendly, interesting conversation. As the children gained con-

fidence, their reactions to the birds, the budding trees, and country life in general led to some bits of expression which had the quality of poetry.

Since the cabin was to be an authentic reproduction, there was a need for reliable information. The children were helped to take notes and to organize and summarize their information in order to give reports of this type. They were so impressed with the value of these that they filed them for future reference. Furnishing the cabin called for other reports of a similar nature. Working at the various activities allowed time for conversation and there was evidence that the pupils had learned to enjoy this freedom when eight girls who were making a quilt for the bed visited for some time by themselves. After the cabin was completed, the children used it for dramatic play. They developed several simple dramatizations portraying the occupations and the pleasure of the pioneers.

As always, pets stimulated free expression. One day when the discussion had

centered about the traits of pets, the shyest child in the room was impelled to tell how good her "old hound dog" was at catching rabbits. The children's interest in the dog was such that it has continued to furnish an inexhaustible source of conversation.

Discussing books led to a feeling of confidence in voicing one's personal reaction. It was developed by encouraging the pupils to use their own judgment in making their comments.

Throughout these activities it was apparent that the pupils enjoyed talking to interested listeners—one of whom was their teacher. They appreciated being able to talk without interruption, but enjoyed the reactions of the group at the close of a report. It was very evident that when the pupils had opportunity to use language to further their own interest they wanted to repeat the experience. This attitude led to satisfying, effective practice.

Many situations called for written English. In addition to writing memoranda for reports, the pupils wrote news items for the *Test Tube*, the school paper.

Many occasions required business letters

and social notes. The children practiced writing their Christmas thank you notes at school. They also wrote notes to friends who were ill. One boy brought to school a four-page letter which he had ready to mail to a cousin; this gave evidence that he could write a friendly letter and that he had enjoyed doing it.

Creative writing was encouraged by providing experiences that call forth feeling and by showing appreciation for the contributions made by the pupils. That the feeling of confidence in creative expression is growing was evidenced one week when the sight of a beautiful snow storm inspired the children to write the words and music to a snow song.

In conclusion: The sharing of feelings and experiences has given to the pupils a sense of well-being and comradeship which is of untold value to their social development. Although no standardized measures have been used to judge progress, there are many evidences that the use of natural situations in the development of language abilities is worthy of consideration.

Developing Creative Experiences

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Developing in prospective teachers a desire to teach creatively is a special responsibility of a laboratory school. One of the best ways to accomplish this purpose is to give to students opportunities to work directly with children as they carry out their creative ideas. In sharing such experiences they participate in many types of activities and come to appreciate with the children the satisfactions of creative expression.

It is the purpose of this section of the bulletin to describe the development of a creative experience in which teachers and students from several departments co-

operated in the preparation of a dramatic production. The description will show: (1) the development of the unit; (2) the use made of the content and special subjects; (3) the co-operation of other people; and (4) the effect of this co-operative effort.

Evidence of interest in insects became apparent early in the year when a third grade pupil brought a cecropia cocoon to school. Another pupil was able to identify it, and attention was called to the mounted specimen already in the school room. The children began at once to search for inform-

THE SONG OF THE BUTTERFLY

THE FLOW'RS ARE VE-RY BEAU-TI-FUL, WE FLY A-BOU-T THEM IN THE
GAR-DEN; WE FLY A-BOU-T THEM IN THE YARD; THE FLOW'RS ARE VE-RY BEAU-TI-FUL

HERE ARE THE BUTTERFLIES

HERE ARE THE BUT-TER-FLIES IN THE FALL, FLY-ING A-ROUND THE FLOW'RS
ALL DAY; WE LIKE THEM SO WELL, WE WISH THEY WOULD STAY.

I AM GRASSHOPPER GREEN

I AM GRASS-HOP-PEA GREEN, I'M A JO-LY GOOD FEL-LOW, I HOP AND I
FLY AND I FLY AND I HOP, ALL THROUGH THE HOT SUM-MER WEATH-ER

GRASSHOPPER GREEN

GRASS-HOP-PEA GREEN, GOES HOP HOP, HOP, IN THE GREEN GRASS WHEN-
EV-ER I PASS GRASS-HOP-PEA GREEN, WHY DON'T YOU STOP

I'M A PRETTY MOTH

I'M A PRET-TY MOTH, I LIKE TO FLY AT NIGHT, I HANG UP-ON A
LEAF ALL DAY, OUT OF THE CHILD-REN'S SIGHT

FIREFLIES

FIRE-FLIES! FIRE-FLIES! YOU FLIT A-BOU-T AT NIGHT YOU
FLY A-BOU-T THE FIELDS, AND SHOW YOUR PRET-TY LIGHT.

GOOD-BYE

GOOD-BYE BUT-TER-FLIES; GOOD-BYE, TREES AND FLOW'RS; GOOD-
BYE GRASS-HOP-PERS; GOOD-BYE, FIRE-FLIES; GOOD-BYE, MOTHS; GOOD-
BYE, GOOD-BYE.

ation. By consulting pictures and a number of elementary science books they gained a fair understanding of the life cycle of the cecropia moth. The cocoon was kept, and one morning late in May a beautiful moth emerged and laid her eggs on a window ledge. Of course, the children were excited and curious. They asked many questions: How long would the moth live? What does it eat? Would the eggs hatch? How could such a big creature get out of such a small opening? As before, the children were helped to find the answers to their questions.

That autumn the children were encouraged to carry on investigations of insects outside the school, but many live insects were brought from the outdoor world and kept in cages for observation and study. For example, the children watched a caterpillar of the monarch butterfly feeding on the leaves of stalks of fresh milkweed until it was fully grown. They watched it form into a chrysalis. Finally they saw the butterfly emerge. They kept grasshoppers in a feeding cage which they had made by placing a lantern globe over clover transplanted to a flower pot. They prepared a box of soil for a full grown tomato sphinx caterpillar. Other insects such as crickets, woolly bears, and larvae of several butterflies were kept under observation.

Soon the children began to record their findings. One of the reports follows:

THE MONARCH BUTTERFLY

The monarch butterfly lays her eggs on the leaves of the milkweed. Caterpillars hatch out of the eggs. A monarch caterpillar eats a lot and grows fast. It sheds its skin several times, and the last time it changes into a chrysalis.

The chrysalis is fastened to a board or rock. It is dark green at the top and gets lighter at the bottom. It has gold dots on it. In two or three days the chrysalis gets darker and in about ten days the butterfly's wings can be seen through the shell. In about twelve days the butterfly comes out. Its wings are wet and it fans them to make them dry.

The monarch butterfly has red brown wings with black veins through them. The edges of the wings are black with white dots.

The male monarch butterfly has a scent pocket on each hind wing.

—Judith Healy, 3B Grade
After a time the children expressed the

desire to give a play about insects for their parents and for the pupils in other grades. As plans were made and the work progressed a fine spirit of co-operation developed, and the creative powers of the children were stimulated. Soon they were needing to use all of the art forms, music, rhythms, and art, in addition to the skills which tool subjects furnish.

The very first idea for the play was rather narrow. The children decided to make trees and flowers for a stage setting and to have children costumed as insects to flit about among them. Later they decided that the audience could understand their play better if they used songs and conversation. As the play developed, two children were chosen to stay on the stage during the entire time. These children were to sing and play the part of interested listeners and spectators. Others as insects were to sing songs and to dance. The songs and dances seemed so well suited to expressing the ideas in the play that no conversation was used.

There was constant revision. Whenever a child said, "I have an idea," he was allowed to present his idea to the group and after thoughtful evaluation it was accepted or rejected. For example, the idea of making trees and flowers for the stage setting was discarded and the children were costumed to represent trees and flowers. Thus more children were given parts in the play, and the stage could be set quickly and easily.

A synopsis follows:

DAYLIGHT SCENE

Stage setting—trees in the background, flowers in the foreground

Songs and dances by butterflies and grasshoppers

TWILIGHT SCENE

Stage setting as above

Songs and rhythms by moths and butterflies

Finale

The art teacher began early to capitalize on the interest in insects. Insect shapes combined with such forms as make up the insect environment—trees, flowers, grasses, leaves, and blue sky—were used in the children's pictures. A need for booklet covers and for a book list poster stimulated



THE DAYLIGHT SCENE

a need for designs. The designs were based on insect forms and were the expression of creativeness in art.

Until the play was begun the art teacher was the only instructor from any other department assisting in the project. But the first discussion of the play made it evident that help would be needed from the music department as well. For when Patty Jo was asked what she would do if she were to play the part of a butterfly, she said she would wear wings and headpiece with antennae, flit about among the flowers, and sing a butterfly song. Then she sang the first song given on page 62. Both words and music were extemporaneous. The music teacher recorded Patty Jo's song and other songs were created by individuals and by the group as songs were needed. Some of the songs are shown on page 62.

The music teacher also helped in developing the rhythms and dances. She played many musical selections, and the children chose the one they thought best suited to the movements of the grasshoppers, of the

moths, of the butterflies, or of the fireflies. Once the music had been selected, individuals or small groups of children gave their interpretation in rhythmic movements. After many try-outs, the children chose the dance they liked best. The dances, too, were changed many times as experience gave the children new ideas. Throughout all these activities the room teacher, the art teacher, and the music teacher guided and helped.

As soon as the play was under way the children wanted to begin work on their costumes. They were eager to "dress up." They worked on newsprint for ideas for wings. The first ones followed the shape and coloring of real butterflies and grasshoppers. Later, the children abandoned imitation and did some creative work. However, those first wings were very valuable. The children wore them in rehearsals. They seemed to quicken the imagination and to move them to a finer type of creative effort in art, music, and rhythm.

After work on the costumes was really started, the art teacher realized that the play offered an opportunity for her col-

lege students to have a valuable experience in working with children. The students were glad to do this and spent several class periods helping the children to make their costumes. They seemed to derive much pleasure and profit from participating. The children appreciated having their help and invited them to come to see the play.

When the time for the play arrived, a new problem arose, namely, how to light the stage effectively. Two college students, under the guidance of the teachers concerned, worked out beautiful lighting effects. When the teachers realized the extent to which the children's mood was affected by the gradual fading of the light that changed daylight into twilight they regretted that the lights had not been available for rehearsals. Even after the play was over the children continued to talk about the beautiful lights and how they felt as the changes were made.

The parents played an important part

in making the play a success. They were much interested and co-operated in many ways. They waited patiently while their children worked on costumes after school hours. They furnished materials and allowed their children to return to school on Saturday in order to complete the costumes. On the day of the play several mothers came early to help get the children ready. After the play was over many parents stayed to help remove the costumes and to express their pleasure in the success of the children's efforts.

In fact, this unit of work developed a fine friendly spirit between parents and teachers, between teachers of different departments, between children, and between children and college students. In addition to those mentioned, other faculty members were interested and brought their classes to see the children at work and later to see their play.

Experimenting in the Development of Reading Vocabulary in Second and Third Grades

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One of the major functions of a laboratory school is to furnish opportunity for experimentation in order to improve the instructional program of the state. In the light of this policy it was determined to investigate a reading problem of concern to every primary teacher—the development of a wide, meaningful vocabulary.

One phase of this problem is the presentation of words. Preliminary investigation revealed two common methods of doing this. One is to select from the lesson new or difficult words and to present them at the beginning of the reading period. The second is to pronounce new words as the children ask for them during the silent reading period. Which of the two methods is more effective? It became the purpose of the ex-

periment to study this factor in the problem of vocabulary development and to seek to determine the relative effectiveness of these two methods of presenting words in the teaching of reading to second and third grade children.

A reading program was planned which represented the best thought in primary reading but which had the one variable factor, the selection and presentation of new vocabulary. With this exception the reading program was the same in both groups. The program included both oral and silent reading of two types, work type and recreatory. Both factual and literary material were used. Room libraries furnished supplementary material.

The specific problem was to measure and

compare the growth of the two groups in terms of improvement in the reading abilities most dependent upon vocabulary development. These reading abilities included word meaning, paragraph meaning, and skill in oral reading.

The two methods selected for comparison were designated, for convenience, as the Initial Presentation Method and the Contextual Presentation Method.

In the Initial Presentation Method the vocabulary to be mastered was selected and presented by the teacher during the initial stages of the reading lesson before the attack upon the new material.

In the Contextual Presentation Method the material was presented directly to the children. The vocabulary was presented during the reading lesson as the new words were needed by the children. The children were, therefore, responsible for the compilation of the vocabulary to be mastered.

Drill, for the purpose of retention, followed both types of presentation.

In order to obtain the number of children needed to make the findings statistically significant, groups of children from the laboratory school, the city schools of Terre Haute, Indiana, and one county school of Vigo County participated in the experiment.

The experimental method was followed. To obtain comparable groups the Detroit Primary Intelligence Test was given to three hundred children. From the data obtained one hundred seven pairs of children of equal intelligence were secured. At the beginning and close of the twelve weeks experimental period, the children were given the New Stanford Reading Test (Forms V and W) and the Gray Standardized Oral Reading Paragraphs.

The measure of the superiority of either method of the presentation of vocabulary was found by comparing the gains made by the two groups.

On the basis of the statistical results

of the testing program the following conclusions were drawn:

1. In the composite silent reading test, the group using the Contextual Presentation Method made a significantly greater gain than the group using the Initial Presentation Method.
2. In paragraph meaning, the group using the Contextual Presentation Method made a significantly greater gain than the group using the Initial Presentation Method.
3. In word meaning, the group using the Initial Presentation Method made a greater gain than that made by the group using the Contextual Presentation Method. The gain was not highly significant.
4. The group using the Initial Presentation Method made much greater progress in word meaning than in paragraph meaning.
5. The group using the Contextual Presentation Method made much greater progress in paragraph meaning than in word meaning.
6. Both groups made greater progress in oral reading than in silent reading.
7. There was no appreciable difference in the progress of the two groups in oral reading.

The statistical findings seemed to lead to the following conclusions:

1. Of the two methods, the Contextual Presentation Method was the more effective in developing ability in comprehension.
2. Of the two methods, the Initial Presentation Method led to a greater knowledge of word meaning.
3. In the growth of oral reading ability, both methods of presenting vocabulary seemed equally effective.

Developing an Experimental Unit in Social Studies

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Social studies in the laboratory school is, as in most schools, the core of the curriculum and as such furnishes the centers of interest through which much of the work is integrated. In general, the units taught follow the program outlined in the Indiana State Course of Study. However, if class discussion suggests a lead to a new approach or emphasis, it is given thoughtful consideration. Then, if possibilities seem to warrant, an experimental unit is developed.

The cave unit developed in a fifth grade through just such a circumstance. The student teacher was approaching the study of various sections of the United States by suggesting a trip across the country. His first problem was to justify this imaginary trip. He led the pupils to discuss the pleasures and values of travel. Then he asked their reaction to several favorite travel books. Thus the pupils came to a realization of the advantages and limitations of "travel geography" and were ready to plan the itinerary of their journey. They began to examine geographies for points of interest.

At this stage a child who happened to be looking through the state supplement of the geography asked, "Why don't we start this trip by finding out about the State Parks of Indiana? We might not have to wait so long to see them." The student teacher recognized that the child had a point, and it so happened that he had had an experience on which to capitalize.

"That is a good idea," he said to the child, adding, "Last summer I was a guide at Marengo Cave State Park in southern Indiana and I'll be glad to tell you about it." He suggested, however, that the children write to the park superintendent for folders in order that his talk might be more

realistic. This letter was written and mailed.

In the meantime the children continued to search for places to visit. That the idea of caves continued to interest them was apparent when a child asked if there were caves in other sections of the country. Examinations of available references revealed the following list:

Marengo and Wyandotte Caves—Indiana
Mammoth Cave—Kentucky
Luray Caverns—Virginia
Carlsbad Caverns—New Mexico

The lead to a study of caves was a new approach to a tour of the United States and was worthy of consideration. The supervising teacher, student teacher, and assistant director of the division of teaching discussed its possibilities. The distribution of the caves would give an approach to at least four sections of the country. A check as to reading material showed that there was enough to make the study feasible. In addition there was the possibility of opening up the science of geology. In fact there seemed to be several reasons for making caves a special feature of the travel unit.

The folders arrived, one for each child. They consisted of pictures of the various rooms of the cave, together with a descriptive text.

The student teacher assumed his role of park guide and gave his talks. He took the pupils from room to room pointing out the important features, introducing them to the various formations, especially those which they would need to understand if they were to carry this study further.

This talk had many values. First, it created respect for the student teacher as a person. Second, it led to the formulation of an outline for their own study, including these points: location, size, forma-

tion, and discovery. It led, too, to the beginning of a vocabulary chart on which to record terms essential to the study of caves. Naturally stalactites and stalagmites were the first to be recorded.

The major activities in connection with the unit were:

1. A study of maps and other geographic reference materials as a means of locating important caves
2. A collection of folders, books, pamphlets, and newspaper clippings describing the caves.
3. A collection of geological formations
4. The writing of business letters and of letters of appreciation to the park superintendent, railroad companies, and others
5. The reading of adventure stories, as "Secret Cave," and others
6. Making cave models
7. Preparation of and giving of reports
8. Development of a vocabulary list of scientific terms

An example of the reports prepared by the children follows.

WYANDOTTE CAVE

Encyclopedia Britannica, V. 23, p. 819
World Book Encyclopedia, V. 12, p. 7902
Americana, V. 29, p. 579

I. Location

- A. In Crawford County, southern Indiana

- B. Five miles from the Ohio River
- C. Five miles northeast of Leavenworth, Indiana
- D. It is less than ten miles from the Marengo Cave

II. Size

- A. Twenty-three miles of underground passages
- B. The entrance is 200 feet above Blue River
- C. Mouth of cave is twenty feet wide and six feet high
- D. The main tunnel is seventy-five feet long
- E. Some chambers are 350 feet long and 175 feet high

III. How it was formed

- A. Tiny streams of water dropped down

The culminating activity was a well-organized exhibit illustrating all phases of the work.

The techniques of instruction and the individual and group problems did not differ from those involved in other activities of this nature.

In conclusion, the experiment of utilizing caves as one phase of the travel unit had certain values; the pupils have an interest in one of the more unusual types of scenery, they have gained an understanding of certain geological formations, and they have begun early to appreciate the government's conservation program through a first hand experience with one of the many persons who render service as guides.

Collecting Free and Inexpensive Teaching Materials

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The desire for materials to enrich and strengthen the educational program of the school is ever present among teachers. The recognition of this desire is especially important in a laboratory school for college students who will be the teachers of the future receive many of their educational standards and ideals in such a school. So it is worth-while for them to have experience in classrooms which are attractive; classrooms which are rich in equipment, books, maps, pictures, and other teaching aids.

But the problem of preparing these prospective teachers to equip barren rooms so that their pupils, in turn, may have the advantages of illustrative materials is one that requires study. For, in addition to the important problems of selection, there is the discouraging factor of meager funds, and, in many cases, no funds at all.

Thus it becomes a challenge for the college and the laboratory school to show through administrative effort and through the initiative of teachers and pupils that many teaching aids may be supplied through free and inexpensive sources. An inspection of the various rooms in the many departments of the laboratory school shows samples of free and inexpensive teaching aids in use. For example, there are sets of supplementary booklets about coffee and the citrus fruits, large illuminated maps of the United States, picture charts about weather and light, and exhibits showing products in all the stages of manufacture.

There are now many commercial enterprises and departments of conservation that have allocated large sums of money to establish educational and research departments under the direction of individuals who are well known in the field of education. Because of the intensive interest in this type of material, much of it is being made more attractive and better suited to the pupils of different levels. Many teachers who are in need of supplementary

material do not hesitate to supply their needs from the compiled lists of addresses that have been published in recent years. A few these follow:

Smith, J. J. *Teaching Aids for the Asking*. Minneapolis: University of Minnesota Press, 1928. 60 pp.¹

Government Publications of Use to Teachers of Geography and Elementary Science. Washington: United States Office of Education, 1930. 14 pp.²

News Bulletin. New York: The Teaching Material Service, 205 East 42nd Street.

Sources of Information on Free and Inexpensive Aids for Classroom Use. Washington: Research Division of the National Education Association, April, 1937.

Readers Modern Guide. Chicago: Morgan-Dillon and Company, 5154 North Clark Street.

Carroll, John, and Miller, Bruce M. *Carroll-Miller List of Teaching Aids and Educational Materials from Commercial Sources*. Sacramento, California: The California Department of Education, Bulletin No. 20, October 15, 1935.

Since many of these lists change annually teachers must watch constantly for revisions and for new sources if they wish to keep their supplies up-to-date and usable.

The possibilities and sources of free and inexpensive materials are first brought to the attention of students on the elementary curriculum in the course Teaching Social Studies in Elementary Schools. Each student is made responsible for collecting some one item in order that he may know the procedure. Later all students are given suggestions regarding organization and filing.

The materials which are collected warrant wider use than has been made of them to date. This is a problem which is as yet unsolved with us, although the tentative

¹*National Society for the Study of Education*, Thirty-second Yearbook. "The Teaching of Geography." Bloomington, Illinois: Public School Publishing Company, 1933. p. 417.

²*Ibid.*



USING THE PICTURE FILE

plan which follows has been suggested. The plan, in general, is this:

Each year one class under the guidance of an adviser vitally interested in devising a central distributing place or bureau of materials in the laboratory school would be responsible for needed revisions and additions to the current lists. Besides the collections made by the students, teachers and friends might be encouraged to contribute some of their excellent but seldom used materials, knowing that they would be carefully cared for and more widely used. Also, teachers might be requested to keep records of units of work taught from year to year. These records would help to determine the types and quantities of pictures, maps, charts, and exhibits to add to the collection.

Later, as the students engaged in their student teaching they would gain practical knowledge of the value of these teaching aids.

As Tippetts points out, such a project would open a way "to develop a more co-operative interest (. . .) and to draw teachers, pupils, and parents into a more

closely knit group, all contributing valuable materials and thereby increasing effective learning."¹⁰ A detailed plan for administering the withdrawals and return of all materials would need to be carefully worked out in order that any learning group would be able to secure the most benefit from the teaching aids that are available.

If the laboratory school with the aid of classes in the college were to start such a collection, it might solicit the industrial plants in Terre Haute and the surrounding territory for materials which they have to offer. Teachers, pupils, parents, and students would have an opportunity to build and keep alive an interest in the happenings of this community. Not much effort has been expended up to the present in a systematic organization of this type of service. With the expenditure of some money and the determination to make an enterprise of this kind a success, the laboratory school could prove its usefulness to all the different individuals that it desires to serve.

¹⁰James S. Tippetts, *Schools for a Growing Democracy* (Chicago: Ginn and Company, 1936), p. 64.

Around the Reading Table

DEPEW, OLLIE. *Children's Literature by Grades and Types*. Ginn and Company, Boston, 1938. 706 pp.

This is a good handbook for student teachers because its purpose is to acquaint them with the field of children's literature, to provide an appreciation for and an understanding of it, and to provide the power to judge and select the best from the over-abundance of material coming daily from the press.

There are adequate discussions and illustrations of the different types of children's literature: myth, epic, medieval romance and saga, fable, fairy tale ballad, Mother Goose, with representative selections from all types of current literature, and extensive annotated bibliographies for each field.

By means of the bibliographies and exercises the student may plan a survey of the whole field of children's reading.

Story-telling, dramatization, poetry, illustrated books and their artists are well discussed with excellent bibliographies included.

The book contains simplified explanations of the nature of classic versus ephemeral literature and indicates the literary quality of the books listed in the bibliographies.

The anthology includes selections from different types of literature arranged in sections corresponding approximately to the reading vocabulary, interest, and comprehension of children in the first eight grades. These groups of selections may be used as a standard by which to choose other literature for a given grade.

The book is attractive in format with bright-colored binding, with appealing illustrations, and with good-sized type on unglazed paper.

—Golda Milliner

Supervisor, Elementary Education
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MCDONNELL, JOHN B. *Your Place in Life and How to Find It*. A Handbook of Opportunity for Youth. The Trailblazers, Champaign, Illinois, 1938. 128 pp.

During the last few years a great deal of material has been published in the general field of guidance and vocational information. Much of this material, however, has been very hastily prepared and very little attention given to its accuracy and readability.

This book, edited by Mr. McDonnell,

consists of a discussion and survey of twenty-two major vocations not requiring a college education. The material for each vocation has been very carefully written by a recognized leader and expert in the vocation. Each discussion is well-organized and interesting and contains enough material to insure the reader of an accurate picture of the vocation.

In this survey of each vocation such subjects as the following are included: educational requirements; method of training; opportunities; physical and mental requirements; how to start; apprenticeship standards; rates of pay; permanency of employment; extent of unionization; occupational hazards and diseases; etc.

A unique and very important feature of the book is the inclusion of a selected bibliography for each vocation. This bibliography includes basic books on the vocation, books on related occupations, trade associations, and trade magazines.

The following occupations are surveyed: tool and die making, foundry work, sheet-metal working, machine work, welding, refrigeration, plastics, telephony, Diesel engineering, radio servicing, electrical work, printing, woodworking, upholstery, insurance, property management, tree surgery, display work, dry cleaning, shoe repairing, baking, and farming.

As indicated in the title, the book is in reality a handbook for youth setting forth the opportunities in each of the twenty-two vocations, and it should form a valuable addition to the literature in the field of guidance and vocational information. The fact that it sells for only twenty-five cents brings it within the reach of all.

—S. A. Yager

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REED, HOMER B. *The Psychology of Elementary School Subjects*. Ginn and Company, Boston, 1938. 582 pp.

That Dr. Homer B. Reed has revised his *Psychology of Elementary School Subjects* will be welcome news to those concerned with education in the elementary schools for it served this group as a dependable reference over a period of a decade.

The revision was warranted, as Dr. Reed points out in the preface. He says, "Since the publication of this book so many contributions to the psychology of elementary school subjects have appeared as to call for a revised edition in order to make them available. These contributions represent

changes in both theory and content. In theory there is increased emphasis on organization, motivation, and individual differences. In content there is new material according with the changes in theory, and there are numerous new experiments. A large proportion of this revised edition is new matter, representative of the growth in the psychology of elementary-school subjects."

There are two sections in the book. The first has to do with theory. It includes a discussion, in four chapters, of the principles basic to effective teaching and learning. The second is given over to the application of theory to effective learning in each of the school subjects. With the addition of the chapters "Elementary Science" and "Health and Physical Education," the text now includes a treatment of the major subject matter fields.

From one to four chapters are devoted to a subject. In general, the treatment of each subject is as follows: a clear, concise statement of purpose, followed by a description of the research basic to the recommended teaching procedures and concluding with an excellent summary and a brief but fairly inclusive bibliography. The text is well annotated and the inclusion of subtitles in the table of contents adds to its usefulness.

This book will serve well as a reference when problems regarding a particular elementary school subject arise. Teachers and students in education will appreciate the clear cut summaries and suggestive procedures. Supervisors and principals will appreciate the thoughtful statements of purpose.

The text is strengthened by the revised treatment of the theory of teaching and of learning and in some cases by the changes in regard to certain subject matter areas. The description of the research basic to the program in social studies increases greatly the value of this section. The inclusion of the subjects previously mentioned adds to the scope.

The value of the book would have been enhanced if recent and pertinent research basic to the programs of reading, language, and certain phases of physical education had been included. The importance of integration as a basic principle of learning is largely neglected. Since so many of the subject matter areas are represented it might have been well to include music, art, and literature.

—Mary D. Reed

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Public School Correlated Attainment Scales.
Grades 5-8. Form A Revised. Public School

Publishing Company, Bloomington, Illinois, 1938.

The Public School Correlated Attainment Scales are composed of twelve subject matter tests and three aptitude tests. One of the aptitude tests is included also with the twelve attainment tests. The entire battery has slightly more than 400 items, eighty-one of which are in the aptitude list.

The attainment tests cover reading, arithmetic, and English. Two out of the three aptitude tests are arithmetic. The purpose seems to be to measure aptitude and attainment with the same type of scale. All scores are in per cent of total possible score and the norms are thus on a per cent scale. The norms run very conveniently ten points higher for each grade.

The test items seem to be well chosen, but no information is given concerning the statistical valuation of the single items or the test as a whole. No validities or reliabilities are given. One table is given for translating per cent scores into aptitude ages and attainment ages.

There are two weaknesses apparent in these tests. One is the use of an aptitude test which has only arithmetic and English items for comparison with the attainment tests which are all arithmetic or English. The other weakness is the use of the per cent score instead of a point score with its relative score equivalent.

—E. L. Abell

Indiana State Teachers College

PRESSEY, S. S. *Pressey English Tests for Grades 5 to 8*. Public School Publishing Company, Bloomington, Illinois, 1938.

The new adaptation of the Pressey tests is well planned to give definite and detailed information concerning each pupil's knowledge of the essentials of capitalization, punctuation, work usage, and sentence structure. It is designed to test not only the average child in grades 5 to 8, but also the one whose superiority in English rates him as high as seventeen-year-old ability.

All of the material is practical, and a maximum of diagnosis is done in a minimum of time and space. Directions for administering and for taking the test are simple and concise, and the scoring key is efficiently arranged.

A particularly excellent and useful feature of the Pressey tests is the accompanying *Diagnostic Record Chart* with correlated scale and concise summary of the rules covered by the test (those few rules which everyone must follow in order to speak and to write acceptable English). At a glance one can see the chronological age, the grade level for aptitude age, the per cent score, and the extent to which each rule has been mastered.

—Mary Reid McBeth

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